

NOTE ON A DART FOUND IN THE BODY-CAVITY OF *HELIX*
ASPERSA.

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Read 10th March, 1905.

AMONG the mollusca there are various calcareous or crystalline secretions, and these secretions may be used for diverse objects. There is found among some bivalves and a few Gastropods a crystalline style. As is well known, this lies in a blind sac, adjoining the intestine, and is probably used as an accessory digestive organ, though only present at certain seasons of the year. It has been observed also to vary in size with the amount of food ingested by the mollusc, suggesting that the structure may represent a reserve of food material with a special secretion, but a chemical modification of surplus food.



Different from both these organs, we find in certain Gastropods, especially the Helicidæ, an ergasidium, the special function of which is to stimulate sexual activity. These excitatory functions are not restricted to male or female, and it has even been thought that most molluscs are provided with some special excitatory, or else alluring, organ. Among some Gastropods, as *Agriolimax* and *Zua*, there is a special stimulatory organ which is a fleshy, linguiform, eversible process. This organ is either in the genital passage, near the outlet, or in a cleft at the base of the copulatory organs. Usually also this belongs to the masculine apparatus, though in *Amalia* it is in the feminine parts.

Another form of ergasidium is the dart of the Helicidæ, etc., variously known as the spiculum amoris, gyprobelum, and love dart. This dart appears to be formed in less than a week, and is a crystalline rod, which is slightly flexible, terminating in a fine point. The base is enlarged to fit upon a conical tubercle at the bottom of the dart-sac. A viscos secretion attaches it to the tubercle, and this also fills up the interior, which is partially hollow.

It used to be thought that it was hurled by one snail at another, being launched into the air and buried in the tissues of the other snail. It is thought now that, as the animals go round one another, previous to conjugation, this dart is pressed out, and is so used to stimulate the pair. In this way, owing to its loose attachment, it may become fixed in the flesh of the other individual and be drawn out.

On May 7th, 1904, in a specimen of *Helix aspersa* which had not previously been observed to conjugate, a dart was found in the body-cavity. It was attached to the interior of the body-wall, almost immediately above the muscle of the penis. This might be explained in two ways. It may have belonged to another individual, and have entered the body through the genital aperture, or it may have belonged to the same individual, and, not being used, have worked its way backwards, and have been replaced by the other dart, which was found fully formed in the dart-sac.

This second theory is supported by an observation made by Mr. W. M. Webb, when the dart was found in the body-cavity of three specimens of *Helix aspersa* which had been dormant for some months.

It would be of interest to know the fate of a dart which has entered the body-cavity, by whatever means it may have got there; but on this point I do not believe anything is at present known.
